# *ENVIRONMENTAL CHECKLIST*

**Purpose of this Checklist:**

The State Environmental Policy Act (SEPA) Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

**Use of this Checklist:**

1. The State will normally make the decision whether an EIS is required within 15 working days of the date a completed application and checklist are submitted for your proposal.

2. Once the completed checklist is submitted, the State may ask you to explain your answers or to provide additional information reasonably related to determining if there may be significant impacts. The State will then normally make the decision whether an EIS is required within 15 working days of receiving the requested information.

3. The State will take no action on your proposal until after the decision is made that an EIS is not required or until after a required final EIS is issued. This means that any hearing on your proposal will not be scheduled until these decisions have been made.

**Instructions for Applicants:**

1. This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

2. You must answer each question accurately and carefully, to the best of your knowledge In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If a question does not apply to your proposal, write "does not apply." ***Complete answers to the questions now may avoid unnecessary delays later.***

3. Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

4. **The checklist questions apply to all parts of your proposal** even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effect.

## TO BE COMPLETED BY APPLICANT

### A. BACKGROUND

1. Name of proposed project, if applicable:

**Anderville Farms 1-6 Exploratory Well**

2. Name of applicant:

**EnCana Oil & Gas (USA) Inc.**

3. Address and phone number of applicant and contact person:

**EnCana Oil & Gas (USA) Inc.**
**US Bank Tower**
**950 – 17th Street, Suite 2600**
**Denver, Colorado 80202**

**Primary Contact: Mike Videtich (EnCana) – Drilling Engineer (720) 956-3770**

**Alternate Contact: Rick Daab, (Sierra Engineering) – Drilling Engineer (281) 448-3858**

4. Date checklist prepared:

**September 10, 2004**

5. Agency requesting checklist:

**Washington State Department of Natural Resources (DNR)**

6. Proposed timing or schedule (including phasing, if applicable) of your proposal:

**EnCana Oil & Gas USA Inc. (EnCana) proposes to begin the drilling program in October 2004, provided the permits are available. The well (Anderville Farms 1-6) will take approximately 90 days to drill and complete. The actual time to drill and complete is primarily dependent upon the drilling progress through the basalt overburden. Upon completion of drilling, the well will be plugged with cement per state regulations and the site restored or casing will be installed for further production testing. Production testing will be conducted in selected zones to evaluate commercial feasibility. The production testing is expected to take approximately 180 days to complete. Upon completion of testing, the well will be plugged with cement per state regulations and the site restored or casing will be installed for further production testing, or shut-in the well pending additional wells and/or facilities each with a separate SEPA analysis.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

**Once the results of the production testing are evaluated, a determination will be made if more drilling and/or testing is warranted. If additional drilling is anticipated, a new permit and SEPA checklist will be submitted at that time.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal (soils reports, surveys, flood plain mapping, drainage studies, traffic studies, etc.):

**A TRAX survey of the project area was conducted by the DNR with no significant impacts found. An on-site inspection of the well site and adjacent areas was conducted by representatives of EnCana, DNR, Grant County, Icicle Creek Engineers (ICE) and others on August 19, 2004. Site environmental conditions as observed on August 19 are described in this Checklist.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

**No other applications affecting the project area are known to exist.**

10. List any governmental approvals or permits that will be needed for your proposal, if known.

- **Washington State Department of Natural Resources Oil and Gas Permit**
- **Washington State Department of Ecology (Ecology) National Pollutant Discharge Elimination System (NPDES) Permit or Wastewater Discharge Permit may be needed**
- **Grant County Planning Department – Conditional Use Permit**
- **Grant County Building Department – Grading Permit**
- **Grant County Public Works Department – County Road Permit for temporary access off of the county road**
- **Ecology Air Quality Program Permit – Temporary Source Approval**

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. If your proposal involves more than one use, give the square footage intended for each use. Describe the site in its existing condition (vegetation, any current use of the site, etc.).

**EnCana is requesting approval to drill a natural gas exploratory well (Anderville Farms 1-6) from the ground surface to approximately 14,000 feet total depth. The drill site will be located on agricultural farmland owned by Anderville Farms Inc. (surface and mineral rights) within portions of the area shown on the Vicinity Map, Figure 1 and the Location Map, Figure 2.**

**The drilling process will utilize two different drilling rigs. The first rig will be used to drill to a depth of approximately 7,700 feet, through the upper basalt units. The second rig will be used to drill to approximately 14,000 feet, the expected completion depth of the well. The drill rigs are described below:**

- **The first drilling rig will have a mast height of approximately 100 feet and a substructure of approximately 15 feet, for a total height of approximately 115 feet. This rig will be utilized to drill through the basalt section to the top of the tuff formation at an approximate depth of 7,700 feet. The rig utilizes a reverse circulating drilling method. A schematic layout of the drill pad for this drilling method is shown on the Schematic Well Site Plan A, Figure 3.**

- **The second drilling rig will have a mast height of approximately 140 feet and a substructure of approximately 20 feet, for a total height of approximately 160 feet. This rig will be utilized to drill the sediments below the basalt. The rig utilizes a conventional rotary circulating drilling method. A schematic layout of the drill pad for this drilling method is shown on the Schematic Well Site Plan B, Figure 4.**

**Operations will be conducted 24-hours per day and 7-days per week with an on-site supervisor present during all drilling, completion and production testing operations. Conductor casing will be set approximately 60 feet beneath the ground surface then cemented back to the ground surface to isolate and protect overburden soils and shallow ground water. Upon completion of drilling the well will be plugged with cement per state regulations and the site restored or 4-1/2 inch casing will be installed for further production testing. Any casing installation and well testing will be done in compliance with DNR requirements.**

**The drill pad will occupy about 4 acres during drilling and testing. The well site is located adjacent to an existing asphalt-surfaced two-lane county road which will provide direct access to the well site via an entry road (about 300 feet in length) to be constructed on the fee owner's surface to the drill pad area. The well site is over 200 feet from any surface water bodies or wetland areas. The well site is over 500 feet from any structure.**

**Site preparation will consist of grading the entry road and drill pad to remove topsoil and provide a firm surface for the drilling and testing equipment. The entry road and drill pad (approximate dimensions of 400 feet by 400 feet) will be surfaced with sand and gravel, crushed rock and/or quarry spalls obtained from a permitted facility. The drill pad will be secured with perimeter fencing to restrict access for safety reasons and to prohibit livestock and other animals from entering the area.**

**The well will be drilled to 14,000 feet with 40-inch diameter conductor casing set at 60 feet (cemented to the surface), 20-inch diameter casing set at 1,500 feet (in bedrock and cemented to the surface), 9 5/8-inch diameter casing set at 7,700 feet (through basalt and cemented back to 5,000 feet) and 4½-inch diameter production casing set at 14,000 feet cemented back to 7,000 feet. The production casing, if run, will be perforated in select intervals based on electric log response, with each interval being hydraulically fractured and each interval tested separately.**

**Upon completion of production testing, the well will either be plugged with cement per state regulations and the site restored (unless further production testing is planned), or the well may be shut-in (temporarily capped) pending assessment of market conditions and securing a gas contract for sales. Any casing installation and well testing will be done in compliance with DNR requirements.**

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the State, you are not required to duplicate maps or detailed plans submitted with the application related to this checklist.

**The well site is located on private agricultural farmland owned by Anderville Farms Inc. (surface and mineral rights) at the location shown on the Vicinity Map, Figure 1 and the Location Map, Figure 2. The well site is located about 7 miles east of the community of Mattawa, in Grant County, Washington as shown on the Vicinity Map, Figure 1. The well site is located in the NW1/4NW1/4 of Section 6, Township 14 North, Range 25 East, Willamette Meridian as shown on the Location Map, Figure 2.**

| TO BE COMPLETED BY APPLICANT | EVALUATION FOR AGENCY USE ONLY |
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| B. ENVIRONMENTAL ELEMENTS<br>1. **Earth**<br>a. General description of the site (circle one):<br>**Flat** Rolling hilly Steep slopes Mountainous<br>Other Gently Sloping | |
| b. What is the steepest slope on the site (Approximate percent slope)?<br>**The well site is located on a slope of less than 2 percent grade. Slopes within a one-mile radius of the well site are less than 10 percent grade.** | |
| c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, mulch)? If you know the classification of agricultural soils, specify them and note any prime farmland.<br>**The Soil Survey of Grant County, Washington (Soil Conservation Service - SCS, January 1984) indicates that the soil types at the well site are Timmerman loamy sand (0 to 5 percent slopes) and Burbank loamy fine sand (0 to 5 percent slopes). According to the Soil Survey, if these soil types are used for irrigated crops, "the mains limitations are the hazard of soil blowing and the low available water capacity." The distribution of SCS soil types at the well site and surrounding areas, based on the 1984 Grant County Soil Survey is shown on the SCS Soils Map, Figure 5.**<br><br>**Regional geologic mapping (Geologic Map of the Priest Rapids 1:100,000 Quadrangle, Washington, Washington State Department of Natural Resources, Washington Division of Geology and Earth Resources, Open File Report 94-13, September 1994) shows that the surficial geology of the well site consists of Pleistocene glacial flood deposits. This deposit consists primarily of gravel. The distribution of surficial geologic units at the well site and adjacent areas is shown on the Geologic Map, Figure 6. The glacial flood deposits in the project area are underlain by basalt.**<br><br>**The well site is currently used as farmland. The surficial soils (topsoil) have been modified as part of this land use.** | |

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| d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.<br>**Based on visual observations of the well site and adjacent areas, and on review of available information, no areas of unstable soils are present, with the exception of the hazard of "blowing soils" as described above. There is no known history of unstable soils in the well site area.** | |
| e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill<br>**The existing well site slopes gently (less than 2 percent grade) to the southeast. Preparation of the entry road (approximately 300 feet in length) and drill pad (approximate dimensions of 400 by 400 feet) will require removal of vegetation (if a crop is present) and remove topsoil to a depth no greater than 3 feet. Approximately 6,000 to 18,000 cubic yards (depending on depth of removal) of topsoil will be removed for preparation of the entry road and drill pad; the topsoil will be stockpiled for use during site restoration. In the event that a larger drill pad is needed, sufficient area is available to enlarge the area.**<br><br>**An area with dimensions of approximately 100 feet by 50 feet by 10 feet deep (about 1,900 cubic yards of soil) will be excavated to construct the reserve pit to contain the drilling fluids as described later in this Checklist. The excavated soil will be mounded around the perimeter of the reserve pit to provide additional containment. The area will be backfilled (with excavated soil) and restored after the drilling and testing is complete.**<br><br>**Another area with dimensions of approximately 20 feet by 40 feet by 10 feet deep (about 300 cubic yards of soil) will be excavated to construct the contingency flare pit.**<br><br>**Imported fill (approximately 6,000 to 18,000 cubic yards) will be required on the entry road and drill pad to support the drilling and testing equipment. The fill will consist of sand and gravel, crushed rock and/or quarry spalls for an "all-weather" surface to provide firm and uniform support for the drilling and testing equipment and to provide an erosion resistant surface for the working area. The source of the imported fill would be from a permitted quarry operation in the vicinity of the well site.**<br><br>**The general layout of the drill pad, including the reserve pit, is shown on the Schematic Well Site Plans A and B, Figures 3 and 4.** | |

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| f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.<br>**Yes. Bare soil in the vicinity of the well site may be susceptible to erosion by wind or water if not mitigated as described below.** | |
| g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?<br>**No asphalt or other artificial impervious surfaces are planned during the drilling or testing operations. It is possible that a small facility would be constructed in the area of the well after drilling and testing is complete.** | |
| h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:<br>**All appropriate erosion and sediment control measures will be installed at the well site before work begins at the direction of an Erosion Control Specialist and in general accordance with local requirements. The well site will be periodically monitored by the Erosion Control Specialist to evaluate the effectiveness of installed Temporary Erosion and Sediment Control (TESC) measures.**<br><br>**The principal means of effective erosion and sediment control is prevention of concentrated surface runoff and protection of the ground surface by reestablishing vegetation. Erosion control practices and methods appropriate for the well site may include the following:**<br>• **On-site containment of surface water originating or flowing within the work areas and access areas**<br>• **Dispersion of surface-water runoff toward the edges of the drill pad**<br>• **Topsoil preservation in adjacent areas to the drill pad**<br>• **Covering of bare soil stockpiles to prevent wind erosion**<br>• **Restore the site as previously described** | |

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| 2. **Air**<br>a. What types of emissions to the air would result from the proposal (i.e. dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.<br>**Dust may be generated during the preparation of the drill pad.**<br><br>**Equipment/vehicle exhaust will be generated on a short-term basis during the drilling and testing operations. Typically, one or two diesel engines will be operating during the drilling, completion and testing of the well.**<br><br>**An enclosed combustion system will be used as an alternative to conventional natural gas flaring. This system will eliminate the need for a flare pit. The enclosed combustion system would have a combustion efficiency of 99.99 percent, with Nox <15 ppm, CO <10 ppm, and CxHy < 10 ppm. These emissions are lower than conventional flaring.**<br><br>**Any natural gas that may be encountered during drilling, completion or testing operations will be properly vented, incinerated or safely flared.** | |
| b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.<br>**No.** | |
| c. Proposed measures to reduce or control emissions or other impacts to the air, if any:<br>**The dust will be controlled by applying water to the ground surface or placing a thin layer of crushed rock in traffic areas, as necessary. Soil stockpiles would be covered to reduce dust, if necessary.**<br><br>**All operating engines (vehicle or equipment) will be in good working order and fitted with approved muffler systems.** | |

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| 3. **Water**<br>a. Surface:<br>1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.<br>**A seasonal irrigation canal is located over 200 feet north of the well site, on the south side of Road 24 SW. The seasonal canal contained water during our August 2004 site visit. According to the property owner, the canal is typically dry between October and March. There are no other surface water bodies within 1,000 feet of the well site. The Saddle Mountain Wasteway is located about 0.4 miles south of the well site.** | |
| 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach plans.<br>**No. The well site will be over 200 feet south of the seasonal irrigation canal.** | |
| 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.<br>**None.** | |
| 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities, if known.<br>**None is expected at this time.** | |
| 5) Does the proposal lie within a 100-year flood plain? If so, note location on the site plan.<br>**No. The well site and adjacent areas are located within an area determined to be outside of the 100-year flood plain, according to the Grant County GIS Environmental Maps (based on the Federal Emergency Management Agency's Flood Insurance Rate Maps).** | |
| 6) Does the proposal involve any discharges of waste materials to the surface waters? If so, describe the type of waste and anticipated volume of discharge.<br>**No.** | |

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| b. Ground<br>1) Will ground water be withdrawn, or will water be discharged to ground water: Give general description, purpose, and approximate quantities, if known.<br><br>**No. The drilling method used will be conducted using closed-loop circulation methods.**<br><br>**Water needed for site operations, drilling, completion and testing, will either be purchased from the municipal source in the community of Mattawa and trucked to the site or purchased from an adjacent landowner and piped to the site.**<br><br>**After the 9-5/8 inch intermediate casing is run, the drilling fluids will be recirculated during the drilling process. Recirculated drilling fluids will be filtered and discharged from the well into steel fluid tanks and the formation cuttings from the upper 7,700 feet (with the basalt units) will be discharged to the reserve pit located adjacent to the drill rig. The reserve pit will be lined. The liner will consist of petroleum-resistant 24 mil woven HDPE polyolefin fabric (5-layer composite) with LDPE coatings, or an approved equivalent. The drilling fluids, including materials from the wellbore, will be contained within the lined reserve pit, and will not be discharged to the ground water without prior approval. Drilling fluids not approved for discharge will be hauled off-site for disposal at an approved facility.**<br><br>**During the production testing phase any water produced from the test well will be contained on-site until water samples have been analyzed by an Ecology approved lab. A NPDES or Wastewater Discharge Permit will be obtained, if necessary, for surface discharge during testing if the water quality is acceptable. If the water quality does not meet discharge requirements it will be disposed of at an approved site.**<br><br>**For information purposes, the approximate location and depth of water wells in the project area are shown on the Water Well Map, Figure 7. Water well information is based on well logs obtained from Washington State Department of Ecology. The nearest water well is approximately 1,000 feet west of the site according to the well logs.** | |

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| 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage, industrial, containing the following chemicals; agricultural, etc.). Describe the systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.<br>**No waste material will be discharged into the ground.**<br><br>**Water and a weighted liquid mud will be used for drilling and completion operations. The drill fluids will be contained and recirculated in steel tanks. The formation fluids and cuttings will be contained on site pending testing and disposal as described below. No hazardous or toxic chemicals will be placed in the system.**<br><br>**The basalt section (expected to extend to a depth of about 7,700 feet) will be drilled with air, water and water base mud. The primary element in the water base mud is bentonite and lime. The bentonite and lime will be mixed with water to obtain the desired density, approximately 9.5 pounds per gallon (ppg). The basalt section will be cased off and all ground water isolated with cement. Basalt cuttings will be contained in the lined reserve pit. These cuttings will be tested per DNR requirements, and disposed of on-site (by burial) if approved.**<br><br>**The section below the basalt (from 7,700 to 14,000 feet) will be drilled with oil base weighted liquid mud. No potable ground water exists at this depth. The primary element in the oil base mud is diesel, lignosulphonate and barite. The lignosulphonate and barite will be mixed with water and oil to obtain the desired density, approximately 15.0 ppg. Formation cuttings and fluids generated between 7,700 and 14,000 feet will be contained on site pending testing and approval for off-site disposal.**<br><br>**The oil base mud will be displaced from the cased wellbore and replaced with water prior to completion operations.**<br><br>**A portable toilet will be maintained on site.** | |

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| c. Water Runoff (including storm water):<br>1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.<br>**Stormwater runoff will occur as a result of direct precipitation onto the drill pad. Stormwater runoff will flow away from the drill pad as dispersed flow toward the perimeter of the site where planted farm crops occur. Stormwater runoff will also be allowed to channel toward the reserve pit and the contingency flare pit in local areas. Any existing road ditches that drain stormwater runoff will be protected with rock spall check dams, as needed.**<br><br>**No stormwater runoff is expected to enter directly into surface water bodies or other waters.** | |
| 2) Could waste materials enter ground or surface waters? If so, generally describe.<br>**No. Potential discharge of waste materials will be mitigated as described below.**<br><br>**The drilling, completion and testing equipment will be fueled on site from aboveground mobile storage tanks. All other equipment (service truck, workers vehicles) will be fueled off site. Proper procedures involving the fueling and maintenance of the drilling, completion and testing equipment will be conducted to prevent accidental spills. A spill kit consisting of fuel absorbent pads will be on site.** | |
| 3) Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:<br>**Drilling fluids and drill cuttings will be contained in appropriately-sized containers and lined pits. Drilling fluids will be contained with closed-loop circulation systems. The drilling rig drains will be plugged and all drain water captured in the pits.**<br><br>**The well site will be reviewed by a qualified Erosion Control Specialist before and during drilling, completion and testing operations. Temporary Erosion and Sediment Control (TESC) measures will be installed according to local requirements. The TESC measures will be modified as necessary, by the Erosion Control Specialist during the drilling, completion and testing operations to maximize the effectiveness of these TESC measures.** | |

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| 4. **Plants**<br>a. Check types of vegetation found on the site:<br>Deciduous tree: alder, maple, aspen, other<br>Evergreen tree: fir, cedar, pine, other<br>Shrubs<br>Grass<br>Pasture<br>**Crops or grain (currently buckwheat and alfalfa, other crops include corn and wheat)**<br>Wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other<br>Water plants: water lily, eelgrass, milfoil, other<br>Other types of vegetation | |
| b. What kind and amount of vegetation will be removed or altered?<br>**Vegetation at the well site consists of rotated crops; there is no permanent vegetation at the site. Vegetation will be removed as necessary to prepare the entry road and drill pad area. The entry road is expected to be about 300 feet long. The drill pad is expected to be an approximate 400 by 400 foot area. Currently, the majority of the drill pad site has existing vegetation (buckwheat and alfalfa).** | |
| c. List threatened or endangered species known to be on or near the site.<br>**A "TRAX" survey identified no known threatened or endangered plant species at the well site or adjacent areas.** | |
| d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:<br>**After work is complete at the well site, the area will be restored to a condition similar to that as previously existed. The sand and gravel, crushed rock and/or quarry spalls used for the drill pad surface will be removed, any compacted surface soils will be scarified, and the previously removed (and stockpiled) topsoil will be replaced per the surface owner's direction.** | |

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| 5. **Animals**<br>a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:<br>Birds: **Hawk,** Heron, **Eagle, Songbirds**<br>Other: **Geese**<br>Mammals: **Deer,** Bear, Elk, Beaver<br>Other: **Coyote, Cattle, Badger, Rabbits, Rodents**<br>Fish: Bass, Salmon, Trout, Herring, Shellfish<br>Other: _____<br>**A perimeter fence will prevent animals from entering the drill pad area.** | |
| b. List any threatened or endangered species known to be on or near the site.<br>**A "TRAX" survey identified no known threatened or endangered animal species in the project area.** | |
| c. Is the site part of a migration route? If so, explain.<br>**Yes. The well site is within the "Pacific Flyway", a migration route for waterfowl.** | |
| d. Proposed measures to preserve or enhance wildlife, if any:<br>**The well site will be restored to a condition at least equal to the existing condition by reestablishing topsoil conditions.** | |
| 6. **Energy and Natural Resources**<br>a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.<br>**None. If a small facility remains at the end of production testing, a local source of electricity may be used.** | |
| b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.<br>**No.** | |
| c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:<br>**None. If successful, further development of this project will provide a significant source of natural gas energy.** | |

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| 7. **Environmental Health**<br>a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.<br>**Potential hazards include natural gas encountered while drilling, fire, blowout, water flow, delivery of diesel for rig operation and personnel safety around the drilling, completion and testing equipment. These risks are controlled by providing adequate pressure control equipment on the drill rig, regular equipment testing and inspection, adherence to DNR regulations and standard industry drilling practice.** | |
| 1) Describe special emergency services that might be required.<br>**Fire protection and emergency medical service.** | |
| 2) Proposed measures to reduce or control environmental health hazards, if any:<br>**All operational procedures including worker safety, equipment maintenance and drilling methods will be conducted in accordance with applicable government regulations associated with environmental and health hazards.**<br><br>**Properly sized blowout prevention equipment will be employed during drilling, completion and testing operations as a safety precaution.** | |
| b. Noise<br>1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?<br>**None.** | |
| 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.<br>**Noise will be generated from drilling equipment up to 24-hours a day for approximately 3 months during drilling and completion operations. Testing and incineration may generate noise 24-hours a day for approximately 180 days during production testing operations.** | |
| 3) Proposed measures to reduce or control noise impacts, if any:<br>**Diesel engines are equipped with exhaust silencers (mufflers).** | |

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| 8. **Land and Shoreline Use**<br>a. What is the current use of the site and adjacent properties?<br>**Agricultural (open space).** | |
| b. Has the site been used for agriculture? If so, describe.<br>**Yes. The site has been and is currently being used as farmland for crops and grain.** | |
| c. Describe any structures on the site.<br>**No permanent structures are located on the site. A circle pivot irrigation system is present on the site. A commercial hay processing facility is located immediately west of the site across Road L SW. No residential structures are located within 500 feet of the well site.** | |
| d. Will any structures be demolished? If so, what?<br>**No.** | |
| e. What is the current zoning classification of the site?<br>**Agriculture.** | |
| f. What is the current comprehensive plan designation of the site?<br>**Irrigated.** | |
| g. If applicable, what is the current shoreline master program designation of the site?<br>**Not applicable.** | |
| h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.<br>**The well site and adjacent areas are not located within any critical areas or cultural resource lands as defined by Grant County Uniform Development Code, Title 24 Environment, Chapter 8 Critical Areas and Cultural Resource Lands, and as shown on Grant County Web Maps. Based on our observations and review of regulations, the well site is not within an erosion, landslide or seismic hazard area.** | |
| i. Approximately how many people would reside or work in the completed project?<br>**None.** | |

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| j. Proposed measures to avoid or reduce displacement impacts, if any:<br>**Not applicable.** | |
| k. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:<br>**None. The proposed drilling project is compatible with projected land uses and plans pending approval of the Conditional Use Permit.** | |
| 9. **Housing**<br>a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.<br>**None.** | |
| b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.<br>**None.** | |
| c. Proposed measures to reduce or control housing impacts, if any:<br>**None.** | |
| 10. **Aesthetics**<br>a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?<br>**No permanent structures are proposed at the well site. The drilling rigs are equipped with masts and substructures with a maximum total rig height of 160 feet. Temporary shelters for the site workers will consist of portable structures (trailers) less than 10 feet high.** | |
| b. What views in the immediate vicinity would be altered or obstructed?<br>**The drilling equipment will be visible from the surrounding areas in all directions.** | |
| c. Proposed measures to reduce or control aesthetic impacts, if any:<br>**None. Visual impacts are temporary and will exist only during the time of drilling and completion operations (approximately 3 months) and production testing (approximately 180 days).** | |

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| 11. **Light and Glare**<br>a. What type of light or glare will the proposal produce? What time of day would it mainly occur?<br>**Drill rig lights will be used at night for rig crew safety during the 24-hours per day drilling and completion operations (approximately 3 months) and production testing (approximately 180 days). The contingency flare will only be used during a rare emergency; if used, the flare will be visible for approximately 180 days during production testing.** | |
| b. Could light or glare from the finished project be a safety hazard or interfere with views?<br>**No.** | |
| c. What existing off-site sources of light or glare may affect your proposal?<br>**None.** | |
| d. Proposed measures to reduce or control light and glare impacts, if any:<br>**None. The well site is located over 500 feet from any residential structures.** | |
| 12. **Recreation**<br>a. What designated and informal recreational opportunities are in the immediate vicinity?<br>**There are no designated recreational opportunities in the immediate vicinity of the well site. The well site is located on privately-owned agricultural farmland. The Saddle Mountain National Wildlife Refuge is located about 5 miles southeast of the well site.** | |
| b. Would the proposed project displace any existing recreational uses? If so, describe.<br>**No.** | |
| c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:<br>**None.** | |

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| 13. **Historic and Cultural Preservation**<br>a. Are there any places or objects listed on, or proposed for, national, state or local preservation registers known to be on or next to the site? If so, generally describe.<br>**None are known on or adjacent to the well site.** | |
| b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.<br>**None are known on or adjacent to the well site.** | |
| c. Proposed measures to reduce or control impacts, if any:<br>**None are required.** | |
| 14. **Transportation**<br>a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.<br>**The well site bordered by an asphalt–surfaced two-lane county road to the west (Road L SW) and an asphalt-surfaced two-lane state highway to the north (Road 24 SW) as shown on the Location Map, Figure 2.** | |
| b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?<br>**No.** | |
| c. How many parking spaces would the completed project have? How many would the project eliminate?<br>**None.** | |
| d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).<br>**No.** | |
| e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.<br>**No.** | |

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| f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.<br>**No vehicle trips are expected for this phase of the project after the drilling, completion and production testing is complete, other than monitoring of the site restoration measures.** | |
| g. Proposed measures to reduce or control transportation impacts, if any.<br>**None required.** | |
| 15. **Public Services**<br>a. Would the project result in an increased need for public services (e.g.: fire protection, police protection, health care, schools, other)? If so, generally describe.<br>**No.** | |
| b. Proposed measure to reduce or control direct impacts on public services, if any.<br>**None required.** | |
| 16. **Utilities**<br>a. Circle utilities currently available at the site:<br>Electricity natural gas water refuse service<br>Telephone sanitary sewer septic system other<br>**Utilities are not currently available at the well site. Electricity and telephone transmission facilities are present along the adjacent roads (Road 24 SW and Road L SW).** | |
| b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.<br>**None. The drilling, completion and production testing operations will be self-contained. Electric service will be provided by on-site generators as needed. Water will be brought in from an approved outside source. A portable toilet will be maintained on site. Trash will be contained and disposed of off-site at an approved facility.** | |

SIGNATURE:

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____ for Icicle Creek Engineers, Inc. as Agent for
Kathy Killman EnCana Oil & Gas USA Inc. (see attached letter)

Date Submitted: September 10, 2004

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